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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,779	02/13/2002	Manoharprasad K. Rao	201-0633 FAM	9492

28549 7590 09/30/2003

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EXAMINER

TRAN, DALENA

ART UNIT

PAPER NUMBER

3661

DATE MAILED: 09/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

SW

Office Action Summary	Application No.	Applicant(s)	
	09/683,779	RAO ET AL.	
	Examiner	Art Unit	
	Dalena Tran	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

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APPLICATION NO/ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT	PAPER
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DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

DETAILED ACTION

Notice to Applicant(s)

1. This office action is responsive to the amendment filed on 7/16/03. Claims 1-20 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1, and 6, are rejected under 35 U.S.C.102(e) as being anticipated by Lemelson et al. (6,226,389).

As per claim 1, Lemelson et al. discloses a pre-crash sensing system for an automotive vehicle coupled to a coupled to a countermeasure system having at least a first countermeasure and a second countermeasure comprising: a radar or lidar unit generating an object distance signal and object relative velocity signal, a vision system generating an object size signal (see column 2, lines 19-43), and a controller coupled to radar unit or lidar unit and vision unit for activating either first countermeasure or the first and the second countermeasure in response to object distance, relative velocity and object size signals (see columns 2-4, lines 44-35; column 6, lines 14-67; and columns 7-9, lines 30-28).

As per claim 6, Lemelson et al. discloses a pre-crash sensing system for an automotive vehicle coupled to a coupled to a countermeasure system having at least a first countermeasure

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and a second countermeasure comprising: a first sensor for generating an object distance signal and relative velocity signal for an object present in a predefined decision zone, and a second sensor generating an object size signal (see columns 5-6, lines 20-13), and a controller coupled to first and second sensor for activating either first countermeasure or the first and the second countermeasure in response to object distance, relative velocity and object size signals (see columns 2-4, lines 44-35; column 6, lines 14-67; and columns 7-9, lines 30-28).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-3, and 7-9, are rejected under 35 U.S.C.103(a) as being unpatentable over Lemelson et al. (6,226,389).

As per claims 2-3, and 7-9, Lemelson et al. disclose object size (see column 2, lines 44-55). Lemelson et al. do not disclose object area and height. However, Lemelson et al. disclose cameras identify the shapes and sizes of objects such as rear and front profiles and their relative sizes or select dimensions. Therefore, it is obvious that object area and height also can be determined.

6. Claim 4, is rejected under 35 U.S.C.103(a) as being unpatentable over Lemelson et al. (6,226,389) in view of Kosiak (5,835,007).

As per claim 4, Lemelson et al. do not disclose longitudinal speed. However, Kosiak discloses a vehicle speed sensor generating a speed signal corresponding to the longitudinal

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speed of the vehicle, wherein controller activates countermeasures in response to the longitudinal speed signal (see columns 3-5, lines 38-24).

7. Claims 5,10-16, and 18, are rejected under 35 U.S.C.103(a) as being unpatentable over Lemelson et al. (6,226,389) in view of Shaw et al. (5,314,037).

As per claim 5, Lemelson et al. do not disclose a decision zone. However, Shaw et al. disclose radar or lidar sensor generates an object distance and relative velocity signals from an object within decision zone and vision sensor confirms the presence of the object within decision zone (see column 3, lines 3-66; and columns 11-12, lines 3-32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Lemelson et al. by combining radar or lidar sensor generates an object distance and relative velocity signals from an object within decision zone and vision sensor confirms the presence of the object within decision zone for accurately distinguishing an object ahead of vehicle whether it in a danger situation or not for making a decision whether to deploy the airbag system.

Claim 10 is method claim corresponding to system claims 1 and 5 above. Therefore, it is rejected for the same rationales set forth as above.

As per claims 11-14, Lemelson et al. disclose determining object size and select dimensions, wherein activating the countermeasure system in response to the object size and select dimensions area (see columns 2-3, lines 44-44). Lemelson et al. do not disclose object cross sectional area and height. However, Lemelson et al. disclose cameras identify the shapes and sizes of objects such as rear and front profiles and their relative sizes or select dimensions. Therefore, it is obvious that object cross sectional area and height also can be determined.

As per claim 15, Lemelson et al. do not disclose a decision zone. However, Shaw et al. disclose detecting an object within the decision zone comprises detecting the object within the decision zone with a radar or lidar sensor system and confirming the presence with a vision system (see columns 6-8, lines 43-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Lemelson et al. by combining radar or lidar sensor generates an object distance and relative velocity signals from an object within decision zone and vision sensor confirms the presence of the object within decision zone for accurately distinguishing an object ahead of vehicle whether it in a danger situation or not for making a decision whether to deploy the airbag system.

As per claim 16, Lemelson et al. disclose choosing either the first countermeasure or the first and the second countermeasure in response to object size (see columns 2-3, lines 44-44).

Claim 18 is method claim corresponding to system claim 5 above. Therefore, it is rejected for the same rationales set forth as above.

8. Claims 17, and 19-20, are rejected under 35 U.S.C.103(a) as being unpatentable over Lemelson et al. (6,226,389), and Shaw et al. (5,314,037) as applied to claim 10 above, and further in view of Farmer et al. (6,085,151).

As per claim 17, Lemelson et al., and Shaw et al. do not disclose activating the countermeasure system in response to the object size and vehicle orientation. However, Farmer et al. disclose activating the countermeasure system in response to object size comprises activating the countermeasure system in response to the object size and vehicle orientation (see the abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Lemelson et al., and Shaw et al. by combining

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activating the countermeasure system in response to the object size and vehicle orientation to reduce the risk or harm to occupants by the airbag inflator while simultaneously reducing the restraint capacity of the airbag inflator, which places occupants at greater risk for injury when exposed to higher severity crashes.

As per claim 19, Farmer et al. disclose activating the countermeasure system in response to detecting an object within the decision zone (see columns 13-14, lines 20-4).

As per claim 20, Lemelson et al., and Shaw et al. do not disclose different type of countermeasure. However, Farmer et al. disclose activating a first countermeasure comprising pre-arming airbags and pretensioning motorized belt pretensioners, or activating first and second countermeasure comprising adjusting the host vehicle suspension height in response to object size and orientation (see column 6, lines 13-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Lemelson et al., and Shaw et al. by combining activating a first countermeasure comprising pre-arming airbags and pretensioning motorized belt pretensioners, or activating first and second countermeasure comprising adjusting the host vehicle suspension height in response to object size and orientation to provide sufficient and properly restraint for normally positioned occupants.

Remarks

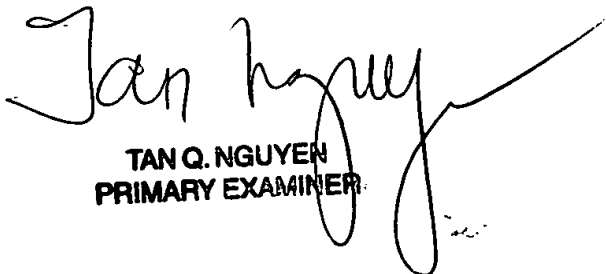
9. Applicant's argument filed on 7/16/03 has been fully considered and they are deemed to be persuasive. However, upon updated search, the new ground of rejection has been set forth as above.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 703-308-8223. The examiner can normally be reached on M-F (7:30 AM-5:30 PM), off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski can be reached on 703-308-3873. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.


TAN Q. NGUYEN
PRIMARY EXAMINER

/dt
September 17, 2003